PDR RID Report

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Document

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Review FOS
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Section	Page	Figure Table

Category Name Design **Actionee** HAIS

Sub Category

Subject Real-time Commands in Expected State Table

Description of Problem or Suggestion:

It is desirable to have the expected state table automatically updated to reflect the actions of any real-time commands sent during a pass so that the table can be as accurate as possible for the next pass.

Originator's Recommendation

Assess the impact of incorporating this feature into the FOS design.

GSFC Response by: **GSFC Response Date**

HAIS Response by: D. Herring **HAIS Schedule** 1/13/95

HAIS R. E. D. Dunn **HAIS Response Date** 1/18/95

The design of the spacecraft expected state check function satisfies current requirements. The spacecraft expected state check capability allows the FOT to compare the planned state of the spacecraft based on preplanned commands (stored and real-time) to the actual state during a real-time contact. Telemetry values that are inconsistent with planned (i.e., expected) values are reported to the FOT. The purpose of this function is to allow a high level verification of back-orbit commanding. The frequency with which the state check may be performed is a function of the FOT and nominally planned in advance for inclusion in the ground script.

Including unplanned real-time commands in the state check will result in a clean compare more frequently, but this may mask problems. The expected state represents the state that CMS used for constraint checking of the upcoming commands. While miscompares may be a result of a real-time command, these miscompares need to be investigated by the FOT to ensure that they do not effect future planned commands (stored or real-time).

The FOS baseline also provides a mechanism for baselining the expected state using the current state. This baseline does not overwrite the CMS provided expected state, it simply creates another state which can be used for a basis of future comparison. This functionality allows the FOT to quickly assess changes in commanded states during a contact or between contacts. This functionality does not indicate whether these changes were planned, unplanned or erroneous.

Status **Closed** **Date Closed** **2/1/95** **Sponsor** **Johns**

****** **Attachment if any** ******